No. 8800080

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Nickerson American Plant Breeders, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Traveler'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D. C. *this* 31st *day of* January *in the year of our Lord one thousand nine hundred and* eighty-nine.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

APPROVAL EXPIRES 2-28-88

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)
Nickerson American Plant Breeders Inc.

2. TEMPORARY DESIGNATION
FL72185A101-5-G9
or E72-101

3. VARIETY NAME
'Traveler'

4. ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*
5201 Johnson Drive, P.O. Box 2955
Mission, Kansas 66201

5. PHONE *(Include area code)*
913-384-4940 KS
303-532-3721 CO
317-563-3111 IN

FOR OFFICIAL USE ONLY

PVPO NUMBER
8800080

6. GENUS AND SPECIES NAME
Triticum aestivum

7. FAMILY NAME *(Botanical)*
Gramineae

FILING
DATE: Feb. 9, 1988
TIME: 1:30 ☐ A.M. ☑ P.M.

8. KIND NAME
Soft Red Winter Wheat

9. DATE OF DETERMINATION
1) 1982
2) 1987

FEES RECEIVED
AMOUNT FOR FILING: $ 1800.00
DATE: Feb. 9 1988
AMOUNT FOR CERTIFICATE: $ 200.00
DATE: Nov. 28, 1988

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Delaware

12. DATE OF INCORPORATION
January 19, 1983

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

R.E. Heiner
P.O. Box 2955
Mission, KS 66201
913-384-4940

Koy Miskin
Rte. 2, Box 411
Brookston, IN 47923
317-563-3111

C. Bruns
806 N. Second St., P.O. Box 30
Berthoud, CO 80513
PHONE *(Include area code)* 303-532-3721

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

a. ☒ Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
b. ☒ Exhibit B, Novelty Statement.
c. ☐ Exhibit C, Objective Description of Variety *(Request form from Plant Variety Protection Office.)*
d. ☒ Exhibit D, Additional Description of Variety.
e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
f. Exhibit F, Quality and Agronomic Data

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act.)*
☒ Yes *(If "Yes," answer items 16 and 17 below)* ☐ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ Yes ☐ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ Foundation ☒ Registered ☒ Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ Yes *(If "Yes," give date)*
☒ No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES ?
☐ Yes *(If "Yes," give names of countries and dates)*
☒ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT: R E Heiner — DATE: 2-2-88

SIGNATURE OF APPLICANT — DATE

FORM LS-470 (3-86) *Edition of 7-84 obsolete.*

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EXHIBIT A.

ORIGIN AND BREEDING HISTORY OF TRAVELER

PARENTAGE: Coker 65-20//IN 4946A4-18-2-10-1/Hadden/3/Vogel 5/Anderson//IN4946A4-18-2-10-1/Hadden

DATE OF CROSS: 1972

BREEDING HISTORY:

Traveler (FL 72185A101-5-G9) was selected from a cross made at Quincy, Florida in 1972 between a Coker breeding line (71 Coker OR 38) and a Georgia breeding line (71T-8371). The pedigree breeding method was used and selections were made in the F3, F4, and F8 generations. The final selection resulted from a single plant grown in the greenhouse in 1980. It has been in yield test since 1982. Approximately 3,000 pounds of Foundation seed were produced in 1986.

Traveler is uniform and stable. Less than 1% of the plants were rogued from the foundation fields in 1987. Approximately 90% of the rogue variant plants were 6 to 15 centimeters taller height than Traveler, 1% were taller and awnless, and .5% were white chaffed. Less than 1% of these total variant plants may be encountered in subsequent generations.

Traveler was bred and developed by Dr. R.D. Barnett, University of Florida-NFREC. Exclusive rights to market, produce and distribute Traveler were purchased by Nickerson American Plant Breeders Inc. in 1986.

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EXHIBIT B.

NOVELTY STATEMENT

Traveler is most similar to the soft red winter wheat Florida 302. However, it can be easily distinquished by the following morphological charateristics:

- Traveler has a bronze chaff color at maturity. Florida 302 has a white chaff color at maturity.
- Traveler has an erect or non-nodding head charater. Florida 302 has a nodding head charater.
- Traveler has a short acuminate beak. Florida 302 has a long acuminate beak, (see statistical data page 1).
- Traveler has a shorter glume length than Florida 302, (see statistical data page 2).

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ANOVA TABLE FOR BEAK LENGTH

'TRAVELER VS. FLORIDA 302'

SOURCE	DF	SS	MS
TOTAL	49	46.613	
VAR	1	23.667	23.66717
ERROR	48	22.946	0.47803

F-TEST=49.509**
CV=5.888
LSD(5%)=0.078

MEANS FOR EACH VARIETY

TRAVELER: 2.60 mm
FLORIDA 302: 3.9 mm

**The difference in means of beak length are significantly different at the 1% probability level.

ANOVA TABLE FOR GLUME LENGTH

'TRAVELER VS. FLORIDA 302'

SOURCE	DF	SS	MS
TOTAL	49	11.506	
VAR	1	4.562	4.56196
ERROR	48	6.944	0.14467

F-TEST= 31.533**
CV= 0.770
LSD(5%)= 0.043

MEANS FOR EACH VARIETY

TRAVELER: 6.71 mm
FLORIDA 302: 7.31 mm

**The difference in means of glume length are significantly different at the 1% probability level.

'Traveler'

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*TRITICUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Nickerson American Plant Breeders Inc.

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
5201 Johnson Drive, P.O. Box 2955
Mission, KS 66201

FOR OFFICIAL USE ONLY
PVPO NUMBER 8800080
VARIETY NAME OR TEMPORARY DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:
[1] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
[2] 1 = SPRING 2 = WINTER 3 = OTHER *(Specify)* _____ [1] 1 = SOFT 2 = HARD 3 = OTHER *(Specify)* _____

[2] 1 = WHITE 2 = RED 3 = OTHER *(Specify)* _____

3. SEASON - NUMBER OF DAYS FROM ~~EMERGENCE TO~~ January 1st.:
[1][1][0] FIRST FLOWERING [1][1][4] LAST FLOWERING

4. MATURITY *(50% Flowering)*:
[0][7] NO. OF DAYS *EARLIER* THAN ..... [7] 1 = ARTHUR 2 = SCOUT 3 = CHRIS
[---] NO. OF DAYS *LATER* THAN ..... [--] 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7=FL302

5. PLANT HEIGHT *(From soil level to top of head)*:
[0][8][6] CM. HIGH
[---] CM. TALLER THAN ..... [--]
[0][8] CM. SHORTER THAN ..... [7] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7=FL302

6. PLANT COLOR AT BOOTING *(See reverse)*:
[2] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:
[1] 1 = YELLOW 2 = PURPLE

8. STEM:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom: 1 = ABSENT 2 = PRESENT
[2] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
[1] Internodes: 1 = HOLLOW 2 = SOLID
[0][4] NO. OF NODES *(Originating from node above ground)*
[2][3] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:
[2] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:
[2] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER *(Specify)*: _____
[2] Flag leaf: 1 = NOT TWISTED 2 = TWISTED
[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
[3][4] MM. LEAF WIDTH *(First leaf below flag leaf)*
[1][4] CM. LEAF LENGTH *(First leaf below flag leaf)*:

FORM LPGS-470-6 (7-81) (Edition of 3-79 may be used)

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'Traveler'

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FORM GR-470-6 (REVERSE)

11. HEAD:

[3] Density: 1 = LAX 2 = DENSE 3=Middense

[1-2] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) _____

[4] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[5] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): or Bronze chaffed

[9.0] CM. LENGTH [9.6] MM. WIDTH

12. GLUMES AT MATURITY:

[1] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[2] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[2-3] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[3] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE short ave. 2 mm

13. COLEOPTILE COLOR:

[2] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[2] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[2] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[1] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[2-3] Brush: 1 = SHORT 2 = midlong 3 = LONG

[2] Brush: 1 = NOT COLLARED 2 = COLLARED **Approximately 35%

[---] Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[3] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[5.9] MM. LENGTH [2.9] MM. WIDTH [32] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3=Moderately Susceptible 4=Moderately Resistant

[4] STEM RUST (Races) SR9B,10,17 [4] LEAF RUST (Races) LR1,LR10 [3] STRIPE RUST (Races) _____ [0] LOOSE SMUT

[2] POWDERY MILDEW has genes [2] [redacted] Rhizoctonia [4] OTHER (Specify) Septoria tritici

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3=Moderately Susceptible 4=Moderately Resistant

[0] SAWFLY [3] APHID (Bydv.) [0] GREEN BUG [0] CEREAL LEAF BEETLE

[ ] OTHER (Specify) _____ HESSIAN FLY RACES: [0] GP [0] A [0] B [0] C [0] D [0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Florida 302	Seed size	Florida 302
Leaf size	Florida 302	Seed shape	Florida 302
Leaf color	Florida 302	Coleoptile elongation	Florida 302
Leaf carriage	Florida 302	Seedling pigmentation	Florida 302

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States. Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

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EXHIBIT D.

ADDITIONAL BOTANICAL DESCRIPTION OF TRAVELER

Traveler is a soft red winter wheat bred and developed by the University of Florida-NFREC with all rights to market, produce and distribute were purchased by Nickerson American Plant Breeders Inc. in 1986. It was tested as experimental number FL72185A101-5-G9 and E72-101.

Traveler is a short height variety that provides excellent protection to powdery mildew, Rhizoctonia and septoria leaf blotch and very good protection to leaf rust. Fair to good protection is provided for Barley Yellow Dwarf Virus and stripe rust but only fair to poor protection to septoria glume blotch and Hessian fly.

Juvenile growth habit is semi-erect. Plant color at boot is green with a recurved flag leaf. Head shape is tapering to strap, middense, awned and head color is light bronze at maturity. Auricle anthocyanin and auricle hairs are present. Glumes are short in length and of medium width with obligue to rounded shoulders and a shorter type acuminate beak. Seed shape is ovate with rounded cheeks. Seed crease is narrow and shallow.

Traveler is well adapted to Florida, South Carolina, North Carolina, Virginia, Georgia, Alabama, Missouri, Louisiana and Arkansas.

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EXHIBIT E.

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

Traveler was bred and developed by Dr. R.D. Barnett, University of Florida-NFREC. Traveler is owned by the Florida Foundation Seed Producers but the exclusive rights to market, produce and distribute this variety were purchased by Nickerson American Plant Breeders Inc.

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EXHIBIT F.

QUALITY AND AGRONOMIC DATA

1986
USDA - Soft Wheat Quality Laboratory

	Milling Score	Baking Score	TW	Break Flour%	St. Gr. Flour %	E.S.I.	Millablity	Flour % Prot	Cookie Dia.	Top Grain	Cake Volume	Cake Score
Traveler	105A	102A	62.7	30.6	76.3	10.6	112.8	10.6	17.4	5	1058	84
Steele	110A	108A	61.5	32.0	77.5	9.4	121.4	10.5	17.9	7	1058	82
Tyler	100A	100A	62.2	31.1	75.6	11.8	104.7	10.2	17.3	6	1050	82
FL302	109A	102A	62.6	29.6	77.5	9.4	119.9	10.6	17.5	5	1042	84

AGRIPRO SOFT WHEAT VARIETY COMPARISON

REGION	1985-1986 BU/A E72-101	1985-1986 BU/A FL 302	NO LOC	TEST WT. E72-101	TEST WT. FL 302	NO LOC	1986 BU/A E72-101	1986 BU/A FL 302	NO LOC
AR	59	63	22	54.7	55.7	6	59	63	22
GA	42	42	2	-	-	-	42	43	2
FL	60	48	1	59.0	54.5	1	60	48	1
IN	51	43	2	50.7	48.0	1	51	43	2
LA	66	48	1	57.9	56.0	1	48	66	1
MD	72	79	1	59.0	57.0	1	72	79	1
NC	70	75	2	56.1	57.5	2	70	75	2
SC	41	40	1	57.0	59.0	1	41	40	1
VA	54	56	1	60.5	61.2	1	54	56	1
*CP	67	71	4	57.9	58.3	4	67	71	4
*EA	58	61	6	57.4	58.4	6	58	62	6
*MS	59	63	22	54.7	55.7	6	59	63	22
*MW	51	43	2	50.7	48.0	1	-	-	-
*SO	53	54	9	56.6	56.2	5	53	54	9
SE	39	46	1	58.6	56.1	1	39	46	1
SS	58	58	5	53.1	54.0	1	58	58	5
OVERALL	58	60	33	56.3	56.1	16	58	60	33

REGION	1986 BU/A E72-101	1986 BU/A CALDWELL	NO LOC	TEST WT. E72-101	TEST WT. CALDWELL	NO LOC
AR	58	55	20	55.5	57.5	-
*MS	58	55	20	55.5	57.5	5
*SO	58	40	5	53.1	52.0	1
SS	58	40	5	53.1	52.0	1
OVERALL	58	55	20	55.5	57.5	5

REGION	1986 BU/A E72-101	1986 BU/A COKER 916	NO LOC	TEST WT. E72-101	TEST WT. COKER 916	NO LOC
AR	58	52	20	55.5	55.2	-
*MS	59	52	20	55.5	55.2	4
*SO	58	47	5	53.1	55.0	1
SS	58	47	-	53.1	55.0	1
OVERALL	58	52	20	55.5	55.2	4

REGION	1986 BU/A E72-101	1986 BU/A ROSEN	NO LOC	TEST WT. E72-101	TEST WT. ROSEN	NO LOC
AR	52	42	12	55.5	54.7	4
*MS	52	42	12	54.7	55.5	4
*SO	58	38	4	53.1	53.0	1
SS	58	38	4	53.1	53.0	1
OVERALL	52	42	12	55.5	54.7	4

* = MAJOR REGIONS

1987

Balk Knob, AR

	Bu/A	Hd.	TW
Tyler	30	113	54.6
FL302	34	114	52.1
Pio 2555	27	110	51.5
Traveler	33	107	54.0

Bay, AR

	Bu/A	Hd.	TW
Tyler	51	117	50.7
FL302	75	117	54.9
Pio 2555	61	115	52.4
Traveler	72	112	54.2

Jay, FL

	Bu/A	Hd.	TW
Tyler	40	---	52.0
FL302	73	---	56.0
Pio 2555	53	---	55.0
Traveler	74	---	55.0

Quincy, FL

	Bu/A	Hd.	TW
Tyler	22	---	49.0
FL302	65	---	58.0
Pio 2555	44	---	56.0
Traveler	62	---	59.0

Experiment, GA

	Bu/A	Hd.	TW
Tyler	42	---	53.0
FL302	50	---	50.0
Pio 2555	30	---	47.0
Traveler	45	---	49.0

Clayton, NC

	Bu/A	Hd.	TW
Tyler	56	124	57.0
FL302	--	---	----
Pio 2555	42	122	52.6
Traveler	55	115	49.2

Clemson, SC

	Bu/A	Hd.	TW
Tyler	55	117	56.0
FL302	47	117	54.3
Pio 2555	47	115	56.0
Traveler	40	112	55.6

Hartsville, SC

	Bu/A	Hd.	TW
Tyler	52	116	55.1
FL302	81	113	56.2
Pio 2555	64	112	56.2
Traveler	75	105	57.6

Florence, SC

	Bu/A	Hd.	TW
Tyler	37	---	57.6
FL302	43	---	57.7
Pio 2555	37	---	57.5
Traveler	45	---	55.3

St. Matthew, SC

	Bu/A	Hd.	TW
Tyler	53	119	58.4
FL302	50	114	56.5
Pio 2555	56	114	57.3
Traveler	60	109	58.7

1986

Experiment, GA

	Yield	TW	HT	PM
Traveler	44	57	26	0
Saluda	52	58	26	1
FL 302	39	58	29	0
Tyler	36	57	31	2
Pio 2551	34	56	23	1
Steele	38	55	26	5

Plains, GA

	Yield	TW	HD	HT	Sur	PM	LR
Traveler	81	57	90	36	9	0	5
Saluda	82	57	100	37	8	8	3
FL 302	80	55	98	38	9	0	3
Tyler	42	54	108	39	8	5	6
Pio 2551	65	54	106	37	5	0	4
Steele	66	55	104	36	5	7	2

Tifton, GA (Planted 12-6 - some not vernalized)

	Yield	TW	HD	HT	PM	LR
Traveler	38	57	96	33	0	2
Saluda	13	51	113	24	9	0
FL 302	29	51	103	35	0	1
Tyler	6	51	124	25	6	5
Pio 2551	23	51	108	28	0	1
Steele	8	47	116	22	5	0

Queenstown, MD

	Yield	TW	HD	HT	PM	LR
Traveler	72	59	124	36	1	0
Saluda	72	57	129	33	0	0
FL 302	79	57	130	39	0	0
Tyler	81	57	131	41	0	2
Pio 2551	87	57	131	36	0	0

Clayton, NC (Coastal Plain)

	Yield	TW	HD	HT	Sur	PM	LR
Traveler	61	56	107	29	30	3	3
Saluda	52	61	109	26	87	7	3
FL 302	64	56	111	31	25	2	2
Tyler	50	57	111	33	40	5	8
Pio 2551	56	57	112	31	99	5	5
Steele	79	57	129	35	0	1	0

Yield = Bu/A
TW = Test Weight, lb/bu
HD = Heading days from Jan. 1
HT = Height, inches

Tidewater, NC

	Yield	TW	PM	Lodg.
Traveler	79	57	1	2.5
Saluda	80	60	7	4
FL 302	87	59	2	2
Tyler	55	58	4	1
Pio 2551	45	57	2	1
Steele	56	56	5	1

Florence, SC

	Yield	TW	HT	PM
Traveler	30	53	27	0
Saluda	26	58	24	8
FL 302	26	57	26	8
Tyler	23	55	25	9
Pio 2551	18	55	24	7
Steele	22	54	25	9

Clemson, SC

	Yield	TW	HD	HT
Traveler	41	57	103	25
Saluda	45	59	105	25
FL 302	40	59	106	26
Tyler	42	60	109	28
Pio 2551	40	59	107	26
Steele	36	57	105	25

Quincy, FL

	Yield	TW	HD	HT	PM	LR
Traveler	61	59	89	33	1	40
Saluda	32	57	113	30	20	80
FL 302	51	56	98	33	0	10
Tyler	19	53	120	30	40	60
Pio 2551	38	54	112	32	1	20
Steele	26	52	114	31	60	30

Overton, TX

	Yield	TW	HD	HT	PM	LR	Sep
Traveler	52	52	84	30	0	6	3
Saluda	40	45	95	31	0	9	3
FL 302							
Tyler	40	49	98	36	0	8	3
Pio 2551	50	51	94	32	0	3	2
Steele	61	55	92	33	3	2	3

Sur = Survival; 1= best, 9= worst
PM = Powdery Mildew; 1= best, 9= worst
LR = Leaf Rust, 1= best, 9= worst
Lodg = Lodging, 1= erect, 9= down flat

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Average Ratings for Powdery Mildew
USDA uniform nursery, 1987

Variety	Lexington KY	Queenstown MD	Warsaw VA	Coast NC	Hartsville SC	St. Matthews SC	Exper. GA
Traveler	3	0	1	1	1	1	1
FL 302	0	0	0	-	1	1	0
Tyler	0	0	8	4	3	3	4
Steele	8	6	7	9	1	5	4

Erysiphe graminis f. sp. tritici

1 = excellent, 9 = poor

Average Ratings for Leaf Rust
USDA uniform nursery, 1987

Variety	Bay AR	Hartsville SC	St. Matthews SC	Plains GA	Tifton GA
Traveler	4	2	1	4	3
FL 302	3	1	1	3	1
Tyler	9	9	3	9	7
Steele	9	9	1	3	2

Puccinia recondita f. sp. tritici

Ratings: 1 = excellent, 9 = poor

Average Ratings for Wheat Diseases During 1987

Variety	Stripe Rust[a]	BYDV[b]	RZ[c]
Traveler	7	7	3
FL 302	8	8	4*
Tyler	3	7	5*
Steele	8	5	4

Ratings: 1 = excellent, 9 = poor
a Puccinia striformis - Jackson, MS
b Barley yellow dwarf virus - Brookston, IN
c Rhizoctonia cerealis - Brookston, IN
* 1986 data

Average Ratings for Septoria tritici blotch
USDA uniform nursery, 1987

Variety	Lexington KY	Piedmont NC	Coast NC
Traveler	5	3	3
FL 302	4	-	-
Tyler	4	4	2
Steele	6	4	3

Mycosphorella graminicola

Average Ratings for Septoria nodorum

Variety	Tifton GA [a]	Jackson MS [b]
Traveler	8	8
FL 302	2	7
Tyler	7	7
Steele	1	8

Ratings: 1 = excellent, 9 = poor

a USDA uniform nursery
b NAPB data